PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in and relating to a Dental Angle-miller

We, Sodeco Societe des Compteurs DE GENEVE, a Body Corporate organised under the laws of Switzerland, of Grand Pre, Geneva, Switzerland, do hereby 6 declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:-

Dental angle-millers of known construction comprise a handle in which revolves a shaft or axle terminating in a driving pinion, which meshes, generally at an angle of 90 degrees, with a

15 pinion attached to a hollow tool-holder, revolving in a cylindrical recess in the angle-miller head. In order that it may be maintained in its axial position, the tool-holder carrying the pinion abuts, 20 when in position in the recess in the

head, against a rear bearing, whereas the front bearing consists of a nut abutting against a shoulder on the end of the hollow member, the diameter of

25 which at this place is smaller than that of the pinion. In another design, where the height of the head is reduced to a minimum, the head is cut along a medium plane at right angles to the 80 hollow tool-holder, the two halves form-

ing front and rear abutment bearings for this hollow member. This design presents serious constructional difficulties in order to obtain perfect fitting 35 of both halves of the head side by

The present invention does not make use of either of these two methods of retention and abutment of the tool-40 holder. It relates to an improved dental angle-miller, comprising a head with a cylindrical recess in which revolves a hollow tool-holder presenting a toothed crown meshing angularly with 45 a pinion carried by the driving shaft, the invention being characterised by the

features that the hollow tool-holder, when the milling tool is removed from

the holder, is retained solely by a 50 circular shoulder bearing against the pinion teeth, and that the fore part of the head is obturated solely by the fore part of the tool-holder, the diameter of

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which is at least equal to that of the toothed crown.

The accompanying drawing represents a longitudinal section of the angle-miller. The driving axle 1 revolves in the handle 2 of the angle-miller shown in part, and is actuated by a clutch 60 coupled with a rotating transmission member. Its end, extending out of the the head 7; it does not present any driving pinion 4 meshing generally at an angle of 90° with the pinion 5 65 attached to an the hellow tool-helder 14 attached to on the hollow tool-holder 14 rotating in the cylindrical recess 15 in the head 7. The end 6 of the hollow tool holder is of a diameter slightly larger than that of pinion 5 and of the 70 same diameter as that of the recess 15 in the head 7; it does not prevent any shoulder, the axial abutment in both directions being realised solely by the grove 10 cut in the tail of the miller 16 into which engages the key 11, the miller being driven as usual by a flat part 9 engaging into an aperture in shape of segment provided in the rear part of the hollow axis.

In the case where the tool-holder rotates without any miller, for example during its cleaning in an anti-septic liquid, a collar 8 retains it axially, by the fact that its diameter extends over the 85 periphery of the driving pinion 4, which forms abutment and from which

it is separated by a very small space.
In order to permit taking the hollow tool-holder 14 easily out of its recess, a 90 threaded sleeve 12 engaging a threaded part 13 of the handle 2 and a shoulder on an extension 3 of the head 7 enables the head to be released, thus causing the separation of the driving pinion 4 from 95 the collar 8 and from the pinion 5 of the tool-holder.

Having now particularly described and ascertained the nature of our said invention and in what manner the same 100 is to be performed, we declare that what we claim is:-

1. Dental angle-miller comprising a head with a cylindrical recess in which revolves a hollow tool-holder presenting a 105 toothed crown meshing angularly with

a pinion carried on the driving axle, the head is closed solely by the fore of a threaded sleeve engaging on a part of the tool-holder whose diameter threaded part of the handle of the is at least equal to that of the toothed angle-miller 10 crown.

2. Dental angle-miller according to claim MARKS & CLERK

1, characterised by the fact that the separacharacterised in that when the milling tion of the driving pinion from the pinion tool is removed from the holder the of the hollow tool-holder axis is obtained hollow tool-holder is retained solely by a by removing the head of the angle 16 circular shoulder bearing against the miller from its handle the head being pinion teeth, and that the fore part of normally retained in position by means the head is closed solely by the fore of a threaded sleeve engaging on a part of the tool-holder whose diameter threaded part of the handle of the

Dated this 23rd day of January 1945

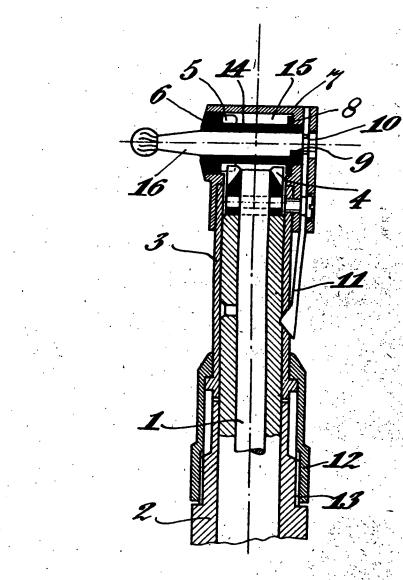
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